



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,441	12/08/2003	John Stewart	TH-2491 (US)	2239
23632	7590	06/16/2006	EXAMINER	
SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463			WONG, ALBERT KANG	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,441

Applicant(s)

STEWART ET AL.

Examiner

Albert K. Wong

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11-18, and 20-27 is/are rejected.
- 7) ☒ Claim(s) 6-10 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Art Unit: 2612

1. This Office action is in response to the application filed December 8, 2003. Claims 1-27 are pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 17, and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by 60/475,441.

Patent Application Publication (PAP) US2004/0246141 (Tubel), filed June 3, 2004 claims the benefit of prior filed provisional application 60/475,441, filed June 3, 2003. It is noted that the provisional application (copy provided to applicant) is significantly different than the PAP, the disclosure anticipates or makes obvious applicants' claimed invention.

Regarding claim 1, the description of the downhole gauge in the provisional application discloses a piezoelectric assembly that is equivalent to the claimed acoustic wave generator; the claimed coupled mechanism is described as slips that expand to touch the tubing for engagement with the inner surface of a pipe; and the claimed signal controller is inherent in the disclosure since there must be some means to drive the acoustic wave generator.

Regarding claim 17, the gauge has been discussed above and the pipe is disclosed in Tubel. Tubel discloses a sensor package to gather data and to communicate the data with the acoustic gauge. The sensor package is considered a SCADA box.

Regarding claim 20, Tubel discloses the use of a downhole gauge within a pipe that has slips to couple to the tubing. Inherent in the use would be the steps of running the gauge into the pipe and setting the gauge in the pipe to enable communication.

Regarding claims 21-22, Tubel discloses the use of slips that couple to the pipe to establish an acoustic transmission path via coupling of the acoustic generator.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-5, 11-16, 18, and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over 60/475,441 (Tubel).

Regarding claims 2-3, Tubel discloses a piezoelectric assembly but not a crystal or a wafer. It is well known in the art that crystals and wafers are conventional acoustic wave generators. It would have been obvious to use such means as suggested by Tubel.

Regarding claim 4, it is well known in the art that magneto-restrictive materials functions in a way similar to piezoelectric materials (the application of a signal causes a mechanical change that induces a vibration in a contact material). It would have been obvious to use a magneto-restrictive material since it is known to be functionally similar to a piezo material.

Regarding claim 5, Tubel discloses the use of a slip to couple with the production tubing. Tubel does not disclose a wedge with a tapered surface for engagement with the pipe. It would have been obvious to use a wedge or to contour the surface of the slip to engage the pipe surface to ensure good coupling of the signal or mechanical coupling of the gauge with the pipe.

Art Unit: 2612

Regarding claim 11, the gauge in Tubel is disclosed to include data acquisition, and data and control communications transmission by utilizing a microprocessor. Thus, the processor is taught. The acoustic generator drive is inherent since there must be some means to drive the acoustic generator. It is conventional to include an ADC in data acquisition systems since measured parameters are in analog form. It would have been obvious to include an ADC for its well-known function.

Regarding claim 12, Tubel discloses that the purpose of the gauge is to measure downhole conditions with sensors. It would have been obvious to include a sensor in communication with the signal controller so that the measured values may be communicated to the surface.

Regarding claim 13, one of the measurements contemplated by Tubel is formation pressure monitoring.

Regarding claim 14, it would have been obvious to use the recited sensors since they are typically used to measure parameter as disclosed in Tubel.

Regarding claims 15-16, Tubel discloses that the purpose of the system is to optimize hydrocarbon production. This would include tools such as valves and pumps. It would have been obvious for a tool to be controlled by the signal controller to control production since the signal controller measures parameter pertaining to optimization of production.

Regarding claim 18, this limitation has been addressed above.

Regarding claims 23-27, the steps would have been obvious since they comprise the steps of using the apparatus in its intended manner. The apparatus have been shown to be obvious.

Art Unit: 2612

6. Claims 6-10, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert K. Wong whose telephone number is 571-272-3057. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Albert K. Wong
June 3, 2006



ALBERT K. WONG
PRIMARY EXAMINER